

RemarksRejection Under 35 U.S.C. § 103(a)

The examiner has rejected claims 1, 3, 4, 6, 7, 9, and 15-17 under this section of the statute on the basis of Mater (US 2004/0198125) in view of Wu (US 3,713,879).

In rejecting claims under 35 U.S.C. § 103(a), it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention.

The Supreme Court recently discussed the proper method for determining whether §103 would act as a bar to patentability of an invention. In doing so, the Court altered the focus of the inquiry:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

KSR Int'l Co. v. Teleflex, Inc., 127 S.Ct. 1727, 1740, 167 L. Ed. 2d 705 (2007) (internal quotations omitted). Thus, the combination of known elements must yield 'more than the predictable' result. *Id.* Therefore, in order to support a rejection of a claim under §103,

the Examiner must show and conclude that the purported invention is simply a known technique applied to an alternate device yielding a predictable result. In contrast, if one applies a known technique that yields an unpredictable result, such application passes the §103 test and the invention is non-obvious.

Importantly, however, *KSR* also requires that there be some motivation to combine the prior art used to support an obviousness rejection.

[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.

(*KSR* at 1741). Thus, there must be some motivation to combine the known references.

Indeed, if there is no motivation to combine known references to yield a known result, the invention is non-obvious and comports with 35 U.S.C. § 103(a).

No motivation exists to combine Mater with Wu

Mater describes and relates to the use of inherently flame retardant materials to produce mattresses, upholstered furniture, fiber-filled bed clothing, etc. The focus of Mater is the use of “Category 1” fibers that are “inherently flame retardant.” Mater involves utilizing these Category 1, inherently flame retardant fibers with “Category 2” fibers made with halogenated monomers. Mater optionally contemplates further mixing the blend of Category 1 fibers and Category 2 fibers with several different types of fibers referred to as Category 3, 4, 5, and 6. Although Mater teaches that the use of Category 3,

4, 5, and 6 fibers is optional, Mater **requires** use of at least Category 1 and Category 2 fibers.

Mater lists several Category 2 fibers including chloropolymeric fibers and fluoropolymeric fibers. Thus, Category 2 compounds taught by Mater are comprised with halides. Upon heating a Category 2 compound, it is possible that halide gas will escape and thus pose a health risk to humans. Contrary to Mater, Applicant's invention does not use any fibers containing halides as inherent flame retardant fibers. Thus, if the fiber produced by Applicant's invention burns, no halide gas is produced and there is no health risk to humans from escaping halide gas.

As such, Mater teaches away from Applicant's invention by requiring the use of inherently flame retardant compounds and fibers containing halides. One skilled in the art would interpret Mater, based upon the clear language, to require using Category 2 (halide containing) fibers. Since Applicant's invention does not use any halide containing fibers, Mater actually teaches away from Applicant's invention. A person of ordinary skill in the art would review Mater and not be inclined to combine it to reach Applicant's invention since Mater teaches away from Applicant's invention.

In addition to teaching away from Applicant's invention due to its use of halide containing, inherently flame retardant fibers, Mater also teaches away from **coated** fibers. Mater uses and, indeed, requires, the use of Category 1 fibers that are **inherently** flame retardant. Mater contemplates producing its inherently flame retardant fibers by an extrusion method. (See ¶65.) Thus, the Category 1 fiber is chemically linked or blended with the Category 2 fiber and extruded resulting in the flame retardant product contemplated by Mater. The resultant fiber contemplated by Mater obtains its flame

retardant characteristic by chemically linking or blending inherently flame retardant fibers.

In contrast, Applicant's invention is directed to fibers that are *coated* with flame retardant compounds in order to achieve their flame retardant characteristics. Thus, Applicant's fibers obtain their flame retardant characteristics by a significantly different manner than the fibers contemplated by Mater. While Applicant's fibers receive a coating that yields flame retardant characteristics, Mater utilizes fibers that are inherently flame retardant.

Mater specifically teaches away from Applicant's method of using coatings to obtain flame retardant characteristics. In discussing fabrics that obtain flame retardant characteristics by means of a coating ("chemically treated fabrics") Mater states:

Typically FR chemically treated fabrics form brittle chars, shrink and crack open after a short exposure to a direct flame. This exposes the underlying material (e.g., polyester fiberfill and/or polyurethane foam), in a composite article, to the open flame. This fabric cracking and shrinking behavior may allow the underlying materials to ignite. When these fabrics made with FR treated cotton, FR polyester and other FR treated fabrics are used in composite articles such as upholstered furniture and mattresses, these composite articles are deemed unsuited for passing the more stringent open flame tests

(See Mater ¶2). Thus, Mater teaches that chemically treated, or coated, fabrics do not perform as well as fabrics formed by utilizing fibers with inherent flame retardant characteristics. Indeed, Examiner acknowledges this difference in the Office Action by stating "Mater differs from the current application and does not teach an FR coated fiber." Applicant agrees with this statement by Examiner and emphasizes the difference between the two – Mater teaches away from Applicant's invention. As such, there is no

motivation to use Mater to achieve the objectives of Applicant's invention – the creation of coated, flame retardant fibers for use in materials.

Examiner additionally cites Wu as a §103 reference against Applicant's invention. However, there is no motivation to combine Mater with Wu. Wu relates to a method for producing organophosphorus compounds and using the compounds to create a flame retardant fabric. Wu discloses treating the fabric with the compounds such that they become flame retardant. "It has also been found that a wide variety of fibrous materials can also be treated to impart flame retardance thereto particularly those materials which have presented difficulties in the past such as fibrous materials constituted with blends of cotton/polyester fibers." Again, however, Wu teaches only a combination of materials to react and impart the flame retardant characteristics to *fabrics*.

Despite Examiners combination of Mater with Wu, a person skilled in the art would have no motivation to combine the teachings of Mater with the teachings of Wu. Indeed, Mater teaches away from the art as taught in Wu. Mater specifically teaches away from using coatings to achieve flame retardant properties while Wu deals specifically with coatings. Thus, a person skilled in the art would not combine Mater with Wu because of the inconsistent teachings with regards to inherent flame retardant characteristics of fibers (Mater) and flame retardant characteristics gained through applying a coating to fabric (Wu).

In addition to the fact that Wu teaches coatings and Mater teaches away from coatings tending to dissuade persons skilled in the art from combining the two references, Wu claims a flame retardant fabric, not a flame retardant fiber. Indeed, claim 1 of Wu claims "A flame retardant cellulose *fabric* produced by a process which comprises

treating a cellulosic *fabric* with a flame retardant amount of the product produced. . . .” (emphasis added). Thus Wu does not teach the preparation or creation of flame retardant fibers, only the creation of flame retardant fabric. There is no motivation for a person skilled in the art who desires to create fibers with certain characteristics to turn to Wu as a teaching reference. Thus, it would be unlikely (and, as discussed earlier, counterintuitive) for a person skilled in the art to combine Mater with Wu to achieve the goals of the present invention – creation of flame retardant, nonwoven *fibers*.

As such, Applicant submits that the Examiner’s rejections of claims 1, 3, 4, 6, 7, 9, and 15-17 as obvious over Mater in view of Wu have been overcome and these claims are now in proper form for allowance.

Rejection of claim 2.

Examiner asserts a basis for rejection of claim 2 despite not listing claim 2 as being rejected. In any event, based upon the foregoing discussion, Applicant submits that claim 2 is not obvious under 35 U.S.C. §103 in light of Mater in view of Wu.

Rejection of claim 5.

Examiner asserts a basis for rejection of claim 5 despite not listing claim 5 as being rejected. In any event, based upon the foregoing discussion, Applicant submits that claim 5 is not obvious under 35 U.S.C. §103 over Mater in view of Wu.

Rejection of claims 33 and 34.

Examiner asserts a basis for rejection of claims 33 and 34 despite not listing claims 33 and 34 as being rejected. In any event, based upon the foregoing discussion, Applicant submits that claims 33 and 34 are not obvious under 35 U.S.C. §103 over Mater in view of Wu.

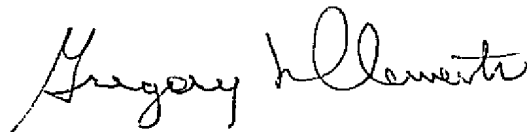
Double Patenting

Examiner states that claims 1-7, 9-14, and 33-34 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over the claims of Application No. 10/392,999. As a preliminary matter, claims 10-14 have been withdrawn. Since this rejection is provisional, no action need be taken at this time. If allowable subject matter is indicated, an appropriate terminal disclaimer will be filed.

Summary

It is believed that all issues have been addressed. If the examiner needs any further information or has any questions, she is asked to telephone the undersigned at the listed number.

Respectfully submitted,



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